

CLAIMS:

Claim 1. (Original). A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of specific binding assays comprising adding an effective amount of a large polycation to serum or plasma containing assay samples during the specific binding assay.

Claim 2. (Original). The method of claim 1 where the large polycation has a molecular weight of 3,000 daltons or greater.

Claim 3. (Currently Amended). The method of claim 1 where in the large polycation is a polylysine, polyornithine, polyornithine, polybrene or MERQUAT.

Claim 4. (Original). The method of claim 3 wherein the large polycation comprises a polylysine with a molecular weight ranging between 5,200 and 11,200 daltons.

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Claim 5. (Original). The method of claim 4 wherein the large polycation comprises polylysine with a molecular weight of 8,800 daltons.

Claim 6. (Original). The method of claim 1 wherein the specific binding assay measures thyroid stimulating hormone, free prostate specific antigen, alpha fetal protein,, Hepatitis B core antibody, Hepatitis B surface antibody or human immunodeficiency virus.

Claim 7. (Original). The method of claim 1 wherein said specific binding assay is performed on a solid phase.

Claim 8. (Original). The method of claim 7 wherein said solid phase comprises paramagnetic microparticles.

Claim 9. (Original). A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a thyroid stimulating hormone specific binding assay comprising adding a large polycation to serum or plasma containing assay samples during the thyroid stimulating hormone specific binding assay.

Claim 10. (Original). The method of claim 9 wherein the large polycation has a molecular weight of 3,000 daltons or greater.

Claim 11. (Original). The method of claim 9 wherein the large polycation is a polylysine, polybrene or MERQUAT.

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Claim 12. (Original). The method of claim 11 wherein the large polycation comprises a polylysine with a molecular weight ranging between 5,200 and 11,200 daltons.

Claim 13. (Original). The method of claim 12 wherein the large polycation comprises polylysine with a molecular weight of 8,800 daltons.

Claim 14. (Original). A method for decreasing interferences which result in inaccurate readings in serum

or plasma containing assay samples of a thyroid stimulating hormone specific binding assay comprising:

a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with anti- $\beta$  TSH antibody and an assay diluent which comprises a large polycation, for a time and under conditions which allow the thyroid stimulating hormone present in the sample to bind to the anti- $\beta$  TSH antibody coated microparticles;

(b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti- $\alpha$  TSH antibody, for a time and under conditions which allow the conjugate to bind to the first complex;

(c) creating a chemiluminescent reaction in the second complex; and

(d) measuring the chemiluminescent reaction as relative light units wherein the amount of thyroid stimulating hormone in the plasma or serum sample is directly related to the measured relative light units.

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Claim 15. (Original). A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of a free prostate specific antigen specific binding assay comprising adding a large polycation to serum or plasma containing assay samples during the free prostate specific antigen specific binding assay.

Claim 16. (Original). The method of claim 15 wherein the large polycation is a polylysine or polyornitine.

Claim 17. (Currently Amended). A method for decreasing interferences which result in inaccurate

readings in serum or plasma containing assay samples of a free prostate specific antigen specific binding assay comprising:

(a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with an antibody specific for free PSA and an assay diluent which comprises a large polycation, for a time and under conditions which allow the free PSA present in the sample to bind to the antibody coated microparticles;

(b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-PSA antibody, for a time and under conditions which allow the conjugate to bind to the first complex;

(c) creating a chemiluminescent reaction in the second complex; and

(d) measuring the chemiluminescent reaction as relative light units wherein the amount of prostate specific antigen in the plasma or serum sample is directly related to the measured relative light units.

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Claims 18-25 (Previously deleted in response to a Restriction Requirement).

Claim 26. (Currently Amended). A method for decreasing interferences which result in inaccurate readings in serum or plasma containing assay samples of total prostate specific antigen specific binding assay comprising:

(a) forming a first complex by incubating a serum or plasma sample with paramagnetic microparticles coated with an antibody which binds both free and complexed PSA and an assay diluent which comprises a large polycation, for a

time and under conditions which allow the PSA present in the sample to bind to the antibody coated microparticles;

(b) forming a second complex by incubating the first complex with an acridinium labeled conjugate comprising an anti-PSA antibody, for a time and under conditions which allow the conjugate to bind to the first complex;

(c) creating a chemiluminescent reaction in the second complex; and

(d) measuring the chemiluminescent reaction as relative light units wherein the amount of prostate specific antigen in the plasma or serum sample is directly related to the measured relative light units.

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